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A study on interactions between anonymous and non-anonymous pre-service teachers in blended learning using creative problem solving technique to enhance pre-service teachers' ability in professional practices.

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Abstract

In Thailand, many pre-service teachers are still shy and afraid to ask questions in the classroom. To enhance pre-service teachers' ability, pre-service teachers need to show their potential and should be encouraged to participate in the class. This paper aims to study the pre-service teachers' interaction and participation in the online mode in terms of blended learning using creative problem solving technique. The sample group of this study was 28 pre-service teachers. The first group was treated anonymously when they were online while the second group was treated non-anonymously.

The findings found that the group that was treated anonymously had the mean (\bar{X}) of online interactions increasing from 196.33 counts to 218.66, 313, and 331.33 for the subsequence weeks. For Non-anonymous group, the mean (\bar{X}) of online interactions was decreased from 333.50 counts to 292, 205, and 232.50 for the subsequence weeks.

Further in-depth interview showed that pre-service teachers in the anonymous group were happier to participate in the discussion. They enjoyed interacting with others online. Therefore, the different settings and the environment of online class could provide the different trend of interactions for different types of identity presented in the online group.

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1. Introduction

One of problems that Thailand is facing is that students do not participate much in course activities. Interaction is one of the most important things in teaching and learning in web-based learning and it can be argued that the success or failure of online learning depended on the quality of interaction (Woo & Reeves, 2008). Thai students are shy and afraid to lose face they answered question incorrectly or their answers are not being accepted by others. Ng'ambi (2008) stated that text is the outcome and medium of online interaction, which it could show the intention and need to be interpreted. Interaction can be online learning spaces that students engage in the topic that they are motivated by a common goal (Saade & Huang, 2009). Researchers and educators have been trying to solve this problem. In learning via website, the website provides opportunity for pre-serviced teachers to interact with others anonymously or non-anonymously. These options give different advantages and disadvantages. For anonymous learning, students have ability to participate in the activity without knowing their identity. They can answer or respond with confidence. They can interact, chat or discuss with anyone without afraid of being judged. They are treated equally. However, without knowing identity, for those who are ignore the activity, it is difficult to motivate them to response because the teacher does not know who they are. In non-anonymous learning, teachers know who they are and can motivate them to participate in the activities and can maximize student's potential. However, pre-serviced teacher would be more hesitate to interact with others because they are afraid that they input would not be accepted.

2. Objective

This paper looks into pre-serviced teacher interaction in blended mode of learning by using creative problem solving technique to enhance their potential in online learning, select type of online interaction, and optimize the teaching style.

3. Research Sample

The sample was 28 pre-serviced teachers from Prince of Songkla University, Pattani Campus who registered for technology and innovation course in first semester of year 2012. They were separated into two groups: the anonymous online learning group and the non-anonymous online learning group. The anonymous online learning group had 14 pre-serviced teachers and they were assigned to work in 3 small groups of 4-5 people. The non-anonymous online learning group consisted of 14 pre-serviced teachers and they also worked on a smaller group of 4-5 people each.

4. Methodology

This research was conducted during July – August 2012. The methodology was divided into three stages as shown in Figure 1.

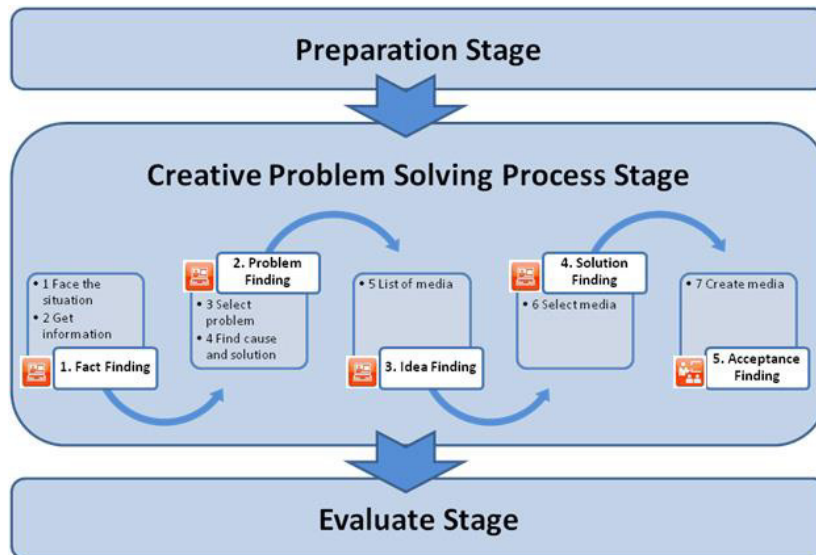


Figure 1 Stages of problem solving technique activity.

- The first stage was preparation stage. Instructor explained the tasks to be done, how to access tools. After preparing students, students would be grouped to small group (4-5 persons per group), the instructor explained the role in the group and let the member in each group assign role to do activity in the group as below:
 - Group's leader: have duty to bring group member to do group activities,
 - Group's secretary: have duty to summarize the group issues and report the group's activities to instructors.
 - Group's member: have duty to participate in group activities give the opinion in discussions in the topic
- The second stage was the creative problem solving process stage. Pre-service teachers were asked to complete the tasks using creative problem solving technique via blended mode of learning. The time frame for these tasks was 5 weeks.
 - First week involved fact finding process. This task was to be done online. Their activities consist of interaction via web board and chat room. The instructor showed the 3-4 problem situations to pre-service teachers. Then group members discussed among the group to select one of the situation to use in group activity process then group members report the result of situation selection with the reason to the instructor. After the group got situation to use in group activity process the group members discussed and brainstormed to get the information from the situation. The students may use questions what - when - where -why and- how to ask and answer to get information from the situation; then group members reported the conclusion of the information from the situation to instructor.
 - Second week involved problem finding process in online based learning. They would do their tasks via chat room and web board. The group members discussed and brainstormed in the information from previous step to analyze what was the problem from information; the students had to list the problem as much as possible, then group members brainstormed to sort the problems which one group had listed by the importance and should be solved first and picked one of the problem to solve and clarified reason to the

instructor. After getting the problem group members discussed and brainstormed to get the cause of the problem as much as possible and find solution to solve cause of the problem, then reported the cause and solution of problem to the instructor

- Third week was about idea finding process and it would be done in online based learning. Pre-serviced teacher would communicate via chat room and web board. They would present and collect variety of solutions during this week. The instructor let group members consider: “students have to be an educator or a media production specialist that you’ll create to solve the problem in previous step” group members discussed and brainstormed to list type of media to create as much as possible then report to instructor.
- For fourth week, the task was related to solution finding process in online based learning. Again, they need to interact via chat room and web board. The group members discussed and brainstormed analyze advantages and disadvantages of each solution, and analyze, evaluate, organize solution, set criteria for selecting media, and consider the best media. Selected one type of media to create with the reason why they selected and reported to instructor.
- Final week, their task was acceptance finding process. This task was conducted in classroom based learning. The activities in the classroom are applying the selected media from the forth week to solve the actual problem. The group members created media they selected in the previous step and test in the situation then report to instructor.
- The third stage was evaluation stage. Pre-serviced teacher would present their work.

5. Findings

In the first process: the fact finding process, it was the first online interaction for both groups. Pre-serviced teachers would select the problem situation and study the fact on that specific problem situation. Instruction would assign the situation that was a problem to the pre-serviced teachers. In the anonymous learning group, there were not many discussions. The leader of the group could not successfully motivate members to brainstorming. The instructor had to facilitate and motivate pre-serviced teachers to exchange their opinions in the activity. For the non-anonymous group, they could gradually continue implementing the discussion. They chatted in both the focused topic and not related to the topic. They could interact in the process successfully. During this process, the average count of interactions for anonymous learning group and non-anonymous learning group are 196.33 and 333.50 times respectively.

In the second process: the problem solving process, pre-serviced teachers had to find the problem in the selected situation in the previous week. They then selected the most important problem that required urgent solution. During this process, the anonymous learning group was still shy. The instructor needed to assist with the discussion, but not as many as the previous week. Some of the subgroup could lead the brainstorming by themselves, but not as good as the instructor needed. For non-anonymous learning group, the discussion and brainstorming went well. They started to participate in the brainstorming. Some subgroups had appointment outside the class to discuss about the assignment. During this process, the average count of interactions for anonymous learning group and non-anonymous learning group are 218.66 and 212.00 times respectively.

In the third process: the idea finding process, pre-serviced teacher collected the instructional media that could be used to solve the selected problem as many as they could. In anonymous learning group, they started to get familiar with online brainstorming and also with each other. They were less shy and the brainstorming environment was getting better. They started to chat with each other more. In non-anonymous learning group, some pre-serviced teacher obviously participated in the interaction, while some of them were less participated in the interaction. During this process, the average count of interactions for anonymous learning group and non-anonymous learning group are 313.00 and 205.00 times respectively.

In the forth process: the solution finding process, pre-serviced teachers selected media from the collected list from the previous step. They needed to consider advantages and disadvantages of each type of media, and the suitability of the media to solve the problem of that situation. After this process, the identity of the members in the anonymous learning group would be revealed in order to continue with the next step. During this process, the anonymous learning group had a lot of discussion including guessing who is who. For those in non-anonymous learning group, the discussion was mostly from the same persons. Some of pre-serviced teachers had gone from the discussion. The instructor needed to motivate them once in a while to make them active in the online interaction. During this process, the average count of interactions for anonymous learning group and non-anonymous learning group are 331.33 and 232.05 times respectively.

There was different in number of online interaction between anonymous learning group and non-anonymous learning group. The finding showed that the average numbers of interaction between these two groups during four weeks of online interaction was not significantly different. The anonymous learning group had the average count of 1059.33 times, where non-anonymous learning had 1063. With further investigation, it was found that anonymous learning group tended to have more online interaction over the weeks. The average count for interactions was 196.33 times, 218.66 times, 313 times and 331.33 times respectively by week. In contrast, the non-anonymous learning group tended to have less online interactions over the weeks. The average count for interactions was 333.50 times, 292 times, 205 times and 232.50 times respectively.

Table 1 below shows the summary of average number of counts for interactions in each group.

Table 1: Average number of counts for interactions in each group

Week No	Creative Problem Solving Process Stage	X of Interactions	
		1 st Group*	2 nd Group**
1	Fact Finding Process	196.33	333.50
2	Problem Finding Process	218.66	292.00
3	Idea Finding Process	313.00	205.00
4	Solution Finding Process	331.33	232.50
Total		1059.33	1063.00

* Anonymous Online Learning Group

** Non-anonymous Online Learning Group

6. Discussion

There was also found that the feeling of these two groups was different in terms of using creative problem solving in their online interaction. The anonymous learning group hesitated to participate at first. They felt that they did not know others and felt shy to share their idea with people that they did not know the identity. As the time passed, this feeling had dissolved. They started used to each other and started to guess who is who in their online learning activities. Terumi & Terry (2011) stated that pseudonym-based activities are effective to provide higher production with less stress. The identity was revealed after the forth week and some of them felt surprise to know the identity of those who answered and shared idea over the past four weeks. While non-anonymous group had fun discussing with their friend online and enjoyed using online tools at the beginning, the trend of online interaction was decreased over the weeks. They felt that it was their job to discuss online. They did not feel that they enjoy doing it. Some of them moved the discussion outside the system. Since they know the identity of each other, they could call, email, or have meeting in person. However, Smirnov (2013) argued that the real name users or the non-anonymous group was more suffer in performance penalties that were avoided by those with pseudonym.

The feeling of instructor who facilitate the also was different in terms of facilitating anonymous group and non-anonymous group. The instructor played an important role in facilitating both groups. Instructor requires careful planning to improve the interaction (Woo & Reeves, 2008). In anonymous learning group, the instructor faced the difficulty in motivating members to share their opinion with others who they did not know the identity. Once the

pre-serviced teachers used to the system, the role of instructor as facilitator was reduced. However, the instructor still needs to control the environment of the discussion. The decisions of the instructor can structure the classroom environment and reduced the complication of those who had difficult relationship and can make them success in the class and continue participate in the class interaction. In non-anonymous learning group, the instructor did not find much problem in the beginning, however, the problem has been found at the end when many pre-serviced teachers had moved discussion outside the system. Thus, the instructor needed to motivate them to participate and interact in the online system. Irby, Wynn, & Strong (2012) stated that students were interested in participating and interacting with other classmates during eLearning and also appreciate the facilitating of the instructor.

7. Recommendation for future research

In this study, the researcher studied the online interaction via the creative problem solving technique for four weeks. The analysis showed that the trend of interaction in anonymous online learning group had increased while the interactions in non-anonymous group had decreased. Thus, it would be interesting to extend the period of conducting the research to see the interaction between these two groups.

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